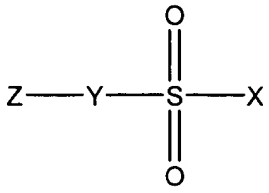
In the claims

Claims 1-70. **(canceled)**

71. **(currently amended)** A coating for contacting a plant surface comprising an effective amount of an anti-fouling compound represented by general structure **2**:



2

wherein

X represents -OH, ~~-O(aryl), -O(acyl), -O(sulfonyl), -CN,~~ F, Cl, or Br;

Y represents O, S, or Se~~, or NR~~;

Z represents optionally substituted alkylphenyl, ~~heteroalkylphenyl, cycloalkyl, heterocycloalkyl, heteroaryl, aralkyl, heteroaralkyl, arylphenyl, heteroarylphenyl~~ or $-(CH_2)_m-R_{80}$, wherein when Z is substituted, a substituent is selected independently for each occurrence from the group consisting of halo, azido, alkyl, aralkyl, alkynyl, cycloalkyl, alkoxyl, nitro, imino, amido, silyl, alkylthio, sulfonyl, sulfonamido, formyl, heterocyclyl, aryl, heteroaryl, and trifluoromethyl;

~~R represents independently for each occurrence hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, or $-(CH_2)_m-R_{80}$;~~

R_{80} represents independently for each occurrence aryl~~, cycloalkyl, cycloalkenyl, heterocyclyl, or polycyclyl~~; and

m is an integer in the range 0 to 8 inclusive; or a salt thereof,

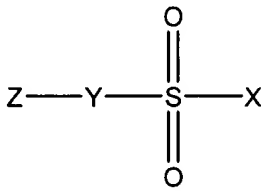
wherein the coating releases the compound or a biologically active fragment thereof, wherein the coating is a liquid or a solid comprising water, an organic polymer, lipid, fat, carbohydrate, wax, inorganic oxide, or silicone polymer ~~when in contact with a liquid or vapor~~.

72. (**previously presented**) The coating of claim 71, wherein Z represents optionally substituted alkylphenyl, or arylphenyl.

73. (**previously presented**) The coating of claim 71, wherein Z represents 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.

74. (**canceled**)

75. (**currently amended**) A coating for contacting a plant surface comprising an effective amount of an anti-fouling compound represented by general structure **3**:



3

wherein

X represents -OH, ~~-O(aryl), -O(acyl), -O(sulfonyl), -CN,~~ F, Cl, or Br;

Y represents O, S, or Se~~, or NR~~;

Z represents optionally substituted ~~branched alkyl or unbranched C_2-C_7 alkyl, heteroalkyl, cycloalkyl, heterocycloalkyl,~~ aryl, ~~heteroaryl, aralkyl, heteroaralkyl,~~ or $-(CH_2)_m-R_{80}$, wherein when Z is substituted, a substituent is selected independently for each occurrence from the group consisting of halo, azido, alkyl, aralkyl, alkynyl, cycloalkyl, alkoxyl, nitro, imino, amido, silyl, alkylthio, sulfonyl, sulfonamido, formyl, heterocyclyl, aryl, heteroaryl, and trifluoromethyl;

~~R represents independently for each occurrence hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, or $-(CH_2)_m-R_{80}$;~~

R_{80} represents ~~independently for each occurrence~~ aryl~~, cycloalkyl, cycloalkenyl, heterocyclyl, or polycyclyl~~; and

m is an integer in the range 0 to 8 inclusive; or a salt thereof,

wherein the coating releases the compound or a biologically active fragment thereof, wherein the coating is a liquid or a solid comprising water, an organic polymer, lipid, fat, carbohydrate, wax, inorganic oxide, or silicone polymer ~~when in contact with a liquid or vapor~~; and wherein the effective amount reduces the number of plant pathogens on a plant surface over about a 24 hour period by a factor of about 4 to about 15 relative to a control plant surface, which does not comprise the compound.

76. (**previously presented**) The coating of claim 75, wherein the effective amount reduces the number of pathogens by a factor of about 8.

77. (**previously presented**) The coating of claim 75, wherein the effective amount reduces the number of pathogens by a factor of about 10.

78. (**previously presented**) The coating of claim 75, wherein the effective amount reduces the number of pathogens by a factor of about 15.

79-103. (**canceled**)

104. (**new**) The coating of claim 71 or 75, wherein the coating comprises water.

105. (**new**) The coating of claim 71 or 75, wherein the coating comprises an inorganic oxide.

106. (**new**) The coating of claim 71 or 75, wherein the coating comprises a silicone polymer.